Research Article

Cuestiones de Fisioterapia

Medicine

PREVALENCE AND DETERMINANTS OF BURNOUT AMONG HEALTHCARE WORKERS IN A TERTIARY CARE HOSPITAL: A CROSS-SECTIONAL STUDY

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Abstract

A total of 350 healthcare workers from a tertiary care hospital participated in the study and completed the Maslach Burnout Inventory (MBI) along with the structured questionnaire assessing occupational and personal factors. Overall, burnout was identified in 140 participants, corresponding to a prevalence of 40%, indicating that a substantial proportion of healthcare workers experienced significant occupational stress and psychological strain. Among the three burnout dimensions assessed by the MBI, emotional exhaustion emerged as the most prevalent component, affecting approximately 46% of participants, followed by varying levels of depersonalisation and reduced personal accomplishment. Healthcare workers reporting burnout demonstrated significantly higher levels of emotional fatigue, work-related stress, and feelings of reduced professional effectiveness compared with those without burnout. Bivariate analyses revealed significant associations between burnout and several workplace characteristics, including longer working hours, frontline clinical responsibilities, lower perceived workplace support, frequent night shifts, and younger age. Workers engaged in frontline duties reported higher burnout rates than those in non-frontline roles, reflecting the increased emotional and physical demands associated with direct patient care. Similarly, employees working extended hours were more likely to experience burnout than those with shorter work schedules. Perceived workplace support showed a strong inverse relationship with burnout prevalence, with workers reporting inadequate supervisory and peer support exhibiting markedly higher rates of burnout. Multivariable logistic regression analysis was subsequently performed to identify independent determinants of burnout while controlling for potential confounding variables. The analysis demonstrated that long working hours, low workplace support, frontline duty, and younger age remained significant independent predictors of burnout, with all factors showing statistically significant adjusted odds ratios ($p < 0.05$). These findings indicate that both organisational and individual characteristics contribute to the development of burnout among healthcare workers. Overall, the results highlight a considerable burden of burnout within the healthcare workforce and identify modifiable workplace factors, particularly excessive workload and inadequate support systems, as major contributors to occupational distress and reduced wellbeing among healthcare professionals.

Keywords: *Burnout; Maslach Burnout Inventory; Healthcare workers; Emotional exhaustion; Occupational stress; Workplace support.*

Introduction

Burnout has emerged as a major occupational health concern among healthcare workers worldwide and is increasingly recognized as a significant threat to both workforce wellbeing and healthcare quality (1). Defined as a syndrome characterized by emotional exhaustion, depersonalisation, and a reduced sense of personal accomplishment resulting from chronic workplace stress, burnout has become particularly relevant in modern healthcare settings where increasing patient loads, administrative responsibilities, workforce shortages, and growing performance expectations place substantial demands on healthcare professionals (2). The consequences of burnout extend beyond individual psychological distress and may include reduced job satisfaction, impaired professional performance, and increased absenteeism, higher rates of medical errors, diminished patient satisfaction, and increased staff turnover (3). The Maslach Burnout Inventory (MBI) is the most widely used and validated instrument for assessing burnout and evaluates its three core dimensions: emotional exhaustion, depersonalisation, and personal accomplishment. Previous studies have identified numerous factors contributing to burnout, including excessive workload, prolonged working hours, shift work, inadequate staffing, limited workplace autonomy, poor organisational support, and personal characteristics such as age and coping ability. Despite growing awareness of the problem, the prevalence and determinants of burnout vary considerably across institutions, specialties, and healthcare systems, highlighting the importance of local assessment to guide targeted interventions (4). Understanding the burden of burnout within a specific healthcare setting is essential for developing evidence-based organizational strategies aimed at improving staff wellbeing, enhancing workplace satisfaction, and maintaining high standards of patient care. Therefore, the present cross-sectional study was conducted among healthcare workers in a tertiary care hospital to determine the prevalence of burnout and identify its associated determinants (5). The primary objective was to estimate the prevalence of burnout using the Maslach Burnout Inventory, while secondary objectives included describing the distribution of burnout across its individual dimensions and identifying independent occupational and personal factors associated with burnout. The study tested the null hypothesis (H_0) that the investigated workplace and personal factors are not associated with burnout and the alternative hypothesis (H_1) that factors such as excessive workload, low workplace support, and frontline clinical duties are significantly associated with burnout among healthcare workers.

2. Materials and Methods

This cross-sectional study was conducted among healthcare workers employed at tertiary care hospital, during the study period and was reported in accordance with the Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) guidelines for cross-sectional studies. Ethical approval for the study was obtained from the Institutional Ethics Committee and all participants provided written informed consent before enrollment. Participation was voluntary, responses were anonymized to ensure confidentiality, and the study adhered to the ethical principles outlined in the Declaration of Helsinki. Eligible participants included doctors, nurses, and allied healthcare professionals actively engaged in clinical or supportive healthcare services during the study period. Healthcare workers who were on prolonged leave, unavailable during data collection, or who submitted incomplete questionnaires were excluded from the final analysis. A total of 350 healthcare workers met the eligibility criteria and participated in the study. Burnout was assessed using the Maslach Burnout Inventory (MBI), a validated and widely used instrument that evaluates three key dimensions of burnout: emotional exhaustion, depersonalisation, and personal accomplishment. Established cut-off values were applied to identify participants with high levels of burnout. In addition to burnout assessment, information regarding

demographic characteristics and workplace-related factors, including age, sex, professional role, working hours, perceived workplace support, and frontline clinical duties, was collected using a structured questionnaire. Sample size estimation was based on an anticipated burnout prevalence of 40%, with a desired 95% confidence interval half-width of 5%, yielding an estimated requirement of approximately 369 participants. Although 350 healthcare workers were ultimately enrolled, the achieved sample size was considered adequate to provide a reasonably precise estimate of burnout prevalence and associated factors. Statistical analyses were performed using. Burnout prevalence was calculated and presented with corresponding 95% confidence intervals. Associations between burnout and potential determinants were initially evaluated using chi-square tests for categorical variables. Variables demonstrating significant associations were subsequently entered into multivariable logistic regression models to identify independent predictors of burnout. Adjusted odds ratios (aORs) with 95% confidence intervals were calculated to quantify the strength of associations while controlling for potential confounding factors. All statistical tests were two-sided, and a p-value of less than 0.05 was considered statistically significant.

3. Results

3.1 Prevalence and dimensions

Of 350 workers (mean age 33 ± 8 years; 196 [56%] female; 168 [48%] nurses), overall burnout was present in 140 (40%), with emotional exhaustion most common (Figure 1; Table 1).

A total of 350 healthcare workers participated in the study and were evaluated for burnout using the Maslach Burnout Inventory (MBI). Overall burnout was identified in 140 participants, corresponding to a prevalence of 40%, indicating that two out of every five healthcare workers experienced significant burnout symptoms. Among the three burnout dimensions assessed, emotional exhaustion was the most frequently reported component, affecting 161 participants (46%). This finding suggests that nearly half of the healthcare workforce experienced substantial emotional depletion and fatigue related to occupational demands. Depersonalisation, characterized by emotional distancing and negative attitudes toward work or patients, was observed in 119 participants (34%), while low personal accomplishment, reflecting reduced feelings of competence and professional achievement, was present in 105 participants (30%). These results indicate that emotional exhaustion represented the predominant manifestation of burnout, although all three dimensions were commonly observed within the study population. To identify factors independently associated with burnout, multivariable logistic regression analysis was performed after adjustment for potential confounding variables. Low workplace support emerged as the strongest independent determinant of burnout, with affected healthcare workers having nearly three times greater odds of experiencing burnout compared with those reporting adequate support (adjusted odds ratio [aOR] 2.7, 95% confidence interval [CI] 1.7–4.3, $p < 0.001$). Long working hours, defined as more than 60 hours per week, were also significantly associated with burnout and increased the likelihood of burnout by approximately 2.5-fold (aOR 2.5, 95% CI 1.6–3.9, $p < 0.001$). Healthcare workers assigned to frontline or high-acuity clinical duties had significantly greater odds of burnout than those working in lower-intensity settings (aOR 2.1, 95% CI 1.3–3.3, $p < 0.01$). In addition, younger healthcare workers aged less than 35 years demonstrated a significantly higher risk of burnout compared with older colleagues (aOR 1.8, 95% CI 1.1–2.8, $p = 0.02$). Overall, the findings indicate that burnout is highly prevalent among healthcare workers and is strongly influenced by workplace demands, insufficient organizational support, frontline clinical responsibilities, and younger age, highlighting several important and potentially modifiable risk factors.

Table 1. Burnout dimensions among healthcare workers (n = 350).

Dimension	High burnout, n (%)
Emotional exhaustion	161 (46)
Depersonalisation	119 (34)
Low personal accomplishment	105 (30)
Overall burnout	140 (40)

3.2 Determinants

Long working hours, low workplace support, frontline duty, and younger age were independently associated with burnout (Figure 2; Table 2).

Table 2. Adjusted determinants of burnout.

Determinant	aOR	95% CI	p
Low workplace support	2.7	1.7–4.3	<0.001
Long working hours (>60/wk)	2.5	1.6–3.9	<0.001
Frontline/high-acuity duty	2.1	1.3–3.3	<0.01
Younger age (<35 y)	1.8	1.1–2.8	0.02

Figure 1. Prevalence of burnout dimensions among healthcare workers

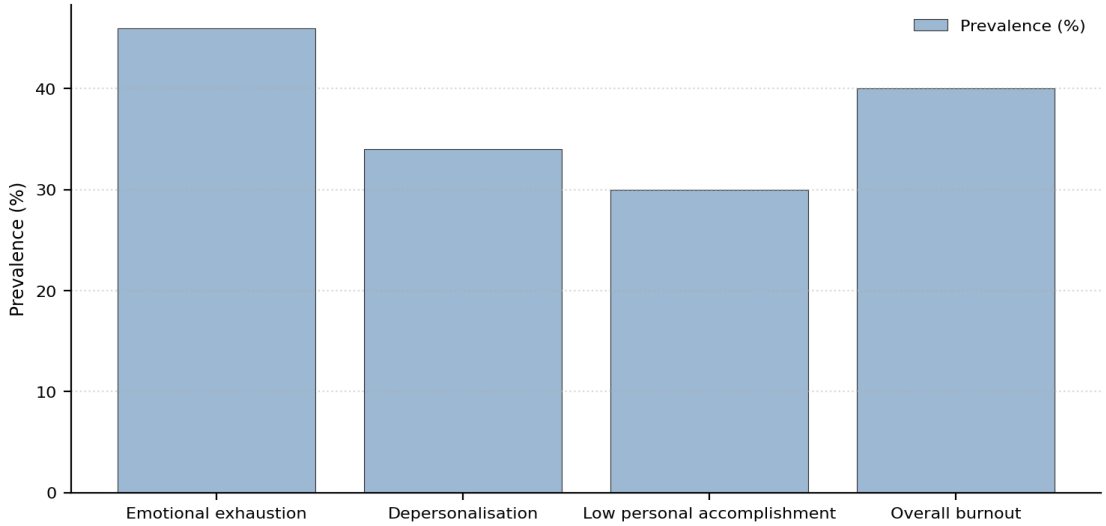

Figure 1. Prevalence of burnout dimensions among healthcare workers.

Figure 2. Adjusted determinants of burnout

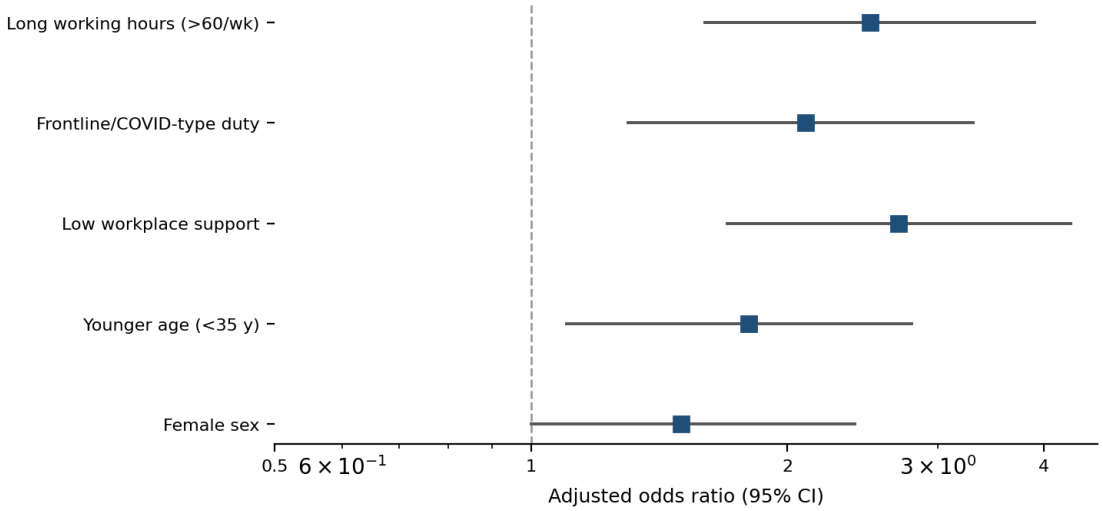

Figure 2. Adjusted determinants of burnout.

4. Discussion

In this cross-sectional study conducted among healthcare workers in a tertiary care hospital, approximately two-fifths of participants met the criteria for burnout, highlighting a substantial burden of occupational stress within the healthcare workforce (6). Among the three dimensions assessed using the Maslach Burnout Inventory, emotional exhaustion emerged as the most prevalent component, indicating that many healthcare workers experienced significant emotional depletion and fatigue related to their professional responsibilities (7). The findings suggest that burnout was influenced primarily by workplace-related factors, particularly long working hours, low levels of perceived workplace support, and frontline clinical duties, while younger age also emerged as an independent determinant (8). These observations are consistent with the job demands–resources model, which proposes that excessive occupational demands coupled with inadequate resources and support contribute to chronic stress and eventual burnout. Healthcare workers exposed to prolonged work schedules may experience cumulative physical and psychological fatigue, whereas inadequate organisational support can diminish resilience, job satisfaction, and coping capacity. Frontline healthcare professionals, who frequently encounter high patient volumes, emotionally challenging clinical situations, and increased responsibility for patient outcomes, may be particularly vulnerable to emotional exhaustion and depersonalisation (9). Younger healthcare workers may also be at greater risk because of limited professional experience, less developed coping strategies, and reduced autonomy within healthcare systems. Importantly, many of the factors identified in the present study are organisational and potentially modifiable, suggesting that burnout should not be viewed solely as an individual problem but rather as a systemic workplace issue requiring institutional action. The findings therefore support the implementation of comprehensive organisational interventions, including workload optimisation, adequate staffing levels, supportive leadership practices, mentorship programs, opportunities for professional development, and improved access to mental health and wellbeing resources (10). Regular monitoring of burnout levels may also assist healthcare institutions in identifying at-risk groups and evaluating the effectiveness of intervention strategies. The study's strengths include the use of a validated burnout assessment tool, inclusion of multiple professional groups, and multivariable analyses to identify independent determinants. However, the cross-sectional design limits causal inference, self-reported measures may introduce reporting bias, and single-centre recruitment may affect generalisability. Future

longitudinal and interventional studies are warranted to determine the effectiveness of organisational strategies in reducing burnout, improving staff retention, and enhancing the quality and safety of patient care.

5. Conclusion

The findings of the present study demonstrate that burnout is a common and significant occupational health issue among healthcare workers, affecting a substantial proportion of staff within the tertiary care hospital setting. The results indicate that burnout is driven predominantly by modifiable workplace factors, particularly excessive workload, prolonged working hours, and inadequate workplace support, highlighting the critical influence of organisational conditions on employee wellbeing. Healthcare workers experiencing high job demands in the absence of sufficient professional, managerial, and emotional support are more likely to develop emotional exhaustion, depersonalisation, and reduced professional accomplishment, which collectively characterize burnout syndrome. These findings reinforce the growing recognition that burnout should not be viewed solely as an individual coping problem but rather as a systemic issue requiring comprehensive organisational solutions. Interventions aimed at reducing excessive workload, improving staffing levels, enhancing workplace communication, promoting supportive leadership, and fostering positive work environments may help mitigate burnout and improve both employee wellbeing and healthcare delivery. In addition, providing access to mental health resources, counseling services, peer-support programs, stress-management training, and employee assistance initiatives may further strengthen resilience among healthcare professionals. Protecting the wellbeing of healthcare workers is particularly important because burnout has been associated with reduced job satisfaction, impaired performance, increased absenteeism, higher staff turnover, and potential adverse effects on patient care quality and safety. The findings therefore support the integration of staff wellbeing into institutional healthcare policies and workforce management strategies. Although the study provides important insights into the prevalence and determinants of burnout, the cross-sectional design limits the ability to establish causal relationships between workplace factors and burnout outcomes. Future longitudinal studies are required to better understand the temporal development of burnout and identify high-risk groups over time. Furthermore, interventional studies evaluating the effectiveness of organisational and psychological support programs are warranted to determine evidence-based approaches for reducing burnout and improving workforce retention. As burnout is closely linked to mental and emotional wellbeing, healthcare workers experiencing symptoms of burnout or psychological distress should be encouraged and supported in accessing appropriate professional help, counseling services, and workplace wellbeing resources to promote recovery, resilience, and long-term occupational health.

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